Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application. Changes are shown with deletions being designated by strike-through or double-brackets and insertion of new language being underlined.

Listing of Claims:

1. (Previously Presented) A method comprising:

operating a medical device system in a manual mode, the medical device system configured for treatment of a nervous system disorder producing one or more neurological events, operating in the manual mode comprising:

(a) receiving a first set of information from a user with the medical device system, the first set of information being associated with a first treatment therapy configuration;

(b) assessing with the medical device system whether the first set of information is within a range of safety;

(c) manually initiating a first treatment therapy to a patient in accordance with the first set of information;

(d) if the first treatment therapy is not safe, executing a corrective action; and

(e) if the first treatment therapy is safe, storing the first set of information for subsequent use; and

operating the medical device system in a run mode comprising automatically initiating the first treatment therapy to the patient with the medical device system in response to a neurological event if the first treatment therapy is safe.

2. (Original) The method of claim 1, wherein (d) comprises:

preventing re-delivery of the first treatment therapy.

3. (Original) The method of claim 1, wherein (d) comprises:

terminating the first treatment therapy.

4. (Previously Presented) The method of claim 1, wherein operating in the manual mode further comprises:

(f) receiving an indication from the user whether the first treatment therapy is tolerable to the patient; and

(g) if the first treatment therapy is not tolerable, executing a corresponding action.

5. (Previously Presented) The method of claim 1, wherein operating in the manual mode further comprises:

(f) applying a subsequent treatment therapy in accordance with the first set of information.

6. (Previously Presented) The method of claim 1, wherein operating in the manual mode further comprises:

(f) associating a first label with the first set of information.

7. (Previously Presented) The method of claim 6, wherein operating in the manual mode further comprises:

(g) receiving the first label from the user; and

(h) applying a subsequent treatment therapy in accordance with the first label.

8. (Previously Presented) The method of claim 6, wherein operating in the manual mode further comprises:

(g) receiving another set of information from the user, the other set of information being associated with another treatment therapy configuration;

(h) associating another label with the other set of information; and

(i) comparing the first set of information and the other set of information.

9. (Previously Presented) The method of claim 8, wherein operating in the manual mode further comprises:

(j) if the other treatment therapy configuration is essentially unique, storing the other set of information and the other label.

10. (Previously Presented) The method of claim 8, wherein operating in the manual mode further comprises:

(j) if the other treatment therapy configuration is not essentially unique, outputting a notification to the user.

11. (Previously Presented) The method of claim 8, wherein operating in the manual mode further comprises:

(j) if the other treatment therapy configuration is not essentially unique, rejecting the second set of information.

12. (Original) The method of claim 1, wherein the first treatment therapy configuration comprises at least one attribute selected from the group consisting of an electrode configuration, a stimulation parameter, a test treatment therapy level, an indication about safety to the patient, and a level of tolerability by the patient.

13. (Original) The method of claim 12, wherein the stimulation parameter is selected from the group selected from a voltage level of a stimulation pulse, a pulse width of the stimulation pulse, a duration of a stimulation pulse train, a polarity configuration of electrodes, a set of electrodes that is used, and a stimulation frequency.

14. (Previously Presented) The method of claim 1 wherein the first set of information comprises a voltage level of a stimulation pulse, a pulse width of the stimulation pulse, and a configuration of electrodes designating a set of electrodes, and wherein operating in the manual mode further comprises:

(f) determining a charge density that is associated with an electrode in the set of electrodes; and

(g) if the charge density is greater than a predetermined threshold, rejecting the first set of information in order that the first treatment therapy corresponding to the first set of information is not delivered to the patient.

15. (Previously Presented) The method of claim 14, wherein the charge density is approximately equal to a current multiplied by the pulse width of the stimulation pulse divided by a surface area of the electrode.

16. (Original) The method of claim 15, wherein the current is approximately equal to the voltage level of the stimulation pulse divided by an impedance of the set of electrodes.

17. (Cancelled)

18. (Original) The method of claim 1, wherein the treatment utilizes drug infusion.

19. (Previously Presented) The method of claim 18, wherein the first set of information comprises a first input value selected from the group consisting of a drug type, a drug dosage, at least one infusion site, an infusion rate, and a time of delivering the drug dosage.

20. (Original) The method of claim 1, wherein the nervous system disorder is selected from the group consisting of a disorder of a central nervous system, a disorder of a peripheral nervous system, a mental health disorder, and psychiatric disorder.

21. (Original) The method of claim 20, wherein the nervous system disorder is selected from the group consisting of epilepsy, Parkinson's disease, essential tremor, dystonia, multiple sclerosis (MS), anxiety, a mood disorder, a sleep disorder, obesity, and anorexia.

22. (Original) The method of claim 1, wherein the first treatment therapy is selected from the group consisting of electrical stimulation, magnetic stimulation, drug infusion, and brain temperature control.

23. (Original) The method of claim 1, wherein the first treatment therapy is provided to a location of a body selected from the group consisting of a brain, a vagal nerve, a spinal cord, and a peripheral nerve.

24. (Original) The method of claim 1, wherein the medical device system is selected from the group consisting of an external system, an implanted system, and a hybrid system.

25. (Previously Presented) A medical device system for treatment of a nervous system disorder producing one or more neurological events, the system comprising:

a user interface;

a treatment therapy module;

a memory; and

a processor that is connected to the user interface in order to receive a command from a user and to send a response to the user and that instructs the treatment therapy module, the processor configured to perform:

a manual mode comprising:

(a) receiving a first set of information from the user through the user interface, the first set of information being associated with a first treatment therapy configuration;

(b) assessing whether the first set of information is within a range of safety;

(c) receiving an instruction from the user to apply a first treatment therapy to a patient through the treatment therapy module in accordance with the first set of information;

(d) if the first treatment therapy is not safe, executing a corrective action; and

(e) if the first treatment therapy is safe, storing the first set of information in the memory, wherein the first set of information is accessible for a subsequent treatment therapy; and

a run mode comprising automatically initiating the first treatment therapy to the patient in response to a neurological event if the first treatment therapy is safe.

26. (Previously Presented) The system of claim 25, wherein the manual mode further comprises:

(f) receiving an indication from the user whether the first treatment therapy is tolerable to the patient; and

(g) if the first treatment therapy is not tolerable, executing a corresponding action.

27. (Previously Presented) The system of claim 25, wherein the manual mode further comprises:

(f) associating a first label with the first set of information.

28. (Previously Presented) The system of claim 27, wherein the manual mode further comprises:

(g) receiving another set of information from the user, the other set of information being associated with another treatment therapy configuration;

(h) associating another label with the other set of information; and

(i) comparing the first set of information with the other set of information.

29. (Previously Presented) The system of claim 28, wherein the manual mode further comprises:

(j) if the other treatment therapy configuration is essentially unique, storing the other set of information and the other label.

30. (Previously Presented) The system of claim 28, wherein the manual mode further comprises:

(j) if the other treatment therapy configuration is not essentially unique, outputting a notification to the user.

31. (Previously Presented) The system of claim 28, wherein the manual mode further comprises:

(j) if the other treatment therapy configuration is not essentially unique, rejecting the second set of information.

32. (Previously Presented) The system of claim 25, wherein the first set of information comprises a voltage level of a stimulation pulse, a pulse width of the stimulation pulse, and a configuration of electrodes designating a set of electrodes, and wherein the manual mode further comprises:

(f) determining a charge density that is associated with an electrode in the set of electrodes; and

(g) if the charge density is greater than a predetermined threshold, rejecting the first set of information in order that the first treatment therapy corresponding to the first set of information is not delivered to the patient.

33. (Cancelled)

34. (Original) A computer-readable medium having computer-executable instructions for performing the method recited in claim 1.

35. (Previously Presented) A computer-readable medium having computer-executable instructions for performing the method recited in claim 4.

36.-37. (Cancelled)

38. (Previously Presented) The system of claim 25, wherein the medical device system is an external system.

39. (Previously Presented) The system of claim 25, wherein the medical device system comprises an implanted system.

40. (Previously Presented) A method comprising:

operating a medical device system in a manual mode, the medical device system configured for treatment of a nervous system disorder producing one or more neurological events, operating in the manual mode comprising:

(a) receiving a first set of information from a user with the medical device system, the first set of information comprising a definition of a first treatment therapy configuration;

(b) assessing with the medical device system whether the first treatment therapy configuration is acceptable; and

(c) if the first treatment therapy configuration is not acceptable, executing a corrective action with the medical device system; and

operating the medical device system in a run mode comprising if the first treatment therapy configuration is acceptable, automatically initiating a corresponding first treatment therapy to the patient with the medical device system in response to a neurological event.

41. (Previously Presented) The method of claim 40, wherein executing a corrective action comprises preventing use of the first treatment therapy configuration.

42. (Previously Presented) The method of claim 40, wherein executing a corrective action comprises terminating use of the first treatment therapy configuration.

43. (Previously Presented) The method of claim 40, wherein executing a corrective action comprises warning a user about the first treatment therapy configuration.

44. (Previously Presented) The method of claim 40, wherein the first treatment therapy configuration comprises an electrode stimulation configuration and wherein assessing the first treatment therapy configuration comprises computing the charge density of the electrode stimulation configuration with the medical device system and comparing the computed charge density with a threshold.

45. (Previously Presented) The method of claim 40, wherein the first treatment therapy configuration comprises a stimulation configuration and wherein assessing the first treatment therapy configuration comprises determining whether a polarity of a stimulation pulse is acceptable.

46. (Previously Presented) The method of claim 40, wherein operating in the manual mode further comprises:

(d) manually initiating the first treatment therapy to the patient in accordance with the first treatment therapy configuration;

(e) receiving an indication of degree of tolerance of the first treatment therapy from the patient; and

assessing whether the first treatment therapy configuration is acceptable using the indication of the degree of tolerance received from the patient.

47. (New) The method of claim 1,

wherein the first treatment therapy comprises electrical stimulation;

wherein operating in the manual mode further comprises operating a seizure detection algorithm with the medical device system and disabling detection-triggered electrical stimulation by the medical device system while operating in the manual mode; and

wherein operating the medical device system in the run mode further comprises enabling the seizure detection algorithm to initiate the electrical stimulation to the patient with the medical device system in response to a neurological event if the first treatment therapy is safe.

48. (New) The medical device system of claim 25, wherein the first treatment therapy comprises electrical stimulation;

wherein the manual mode further comprises operating a seizure detection algorithm with the medical device system and disabling detection-triggered electrical stimulation by the medical device system while operating in the manual mode; and

wherein the run mode further comprises enabling the seizure detection algorithm to initiate the electrical stimulation to the patient with the medical device system in response to a neurological event if the first treatment therapy is safe.